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Alternatives Reality:
What to Expect From Future Allocations

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Contents

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About Commonfund Institute

Commonfund Institute houses the education and research activities of Commonfund and provides the entire community of long-term investors with investment information and professional development programs. Commonfund Institute is dedicated to the advancement of investment knowledge and the promotion of best practices in financial management. In addition to teaming with NACUBO to produce the NCSE, Commonfund Institute provides a wide variety of resources, including conferences, seminars and roundtables on topics such as endowments and treasury management; proprietary and third-party research and publications, including the Higher Education Price Index (HEPI); and events such as the annual Commonfund Forum and Commonfund Endowment Institute.

Executive Summary

For well more than a decade, the "endowment model" of investing has been synonymous with increasing allocations to alternative investment strategies, defined largely as hedge funds, private real estate, private equity and venture capital and other, generally less liquid or illiquid strategies compared to public markets.

This trend towards alternatives continued unabated until the financial market crisis, paused and then continued the growth path, albeit at a slower rate. Today, the largest educational endowments allocate on average more than half of their portfolios to alternative investment strategies. More broadly, nonprofits of all types regardless of size have generally significant allocations to alternatives. Pension funds, while at much lower allocations, have likewise shifted assets toward alternatives in an effort to boost investment performance and dampen volatility.

Commonfund has long advocated allocations to alternatives to enhance returns and, for certain strategies, to provide diversified sources of alpha. We were among the earliest investors on behalf of our clients in hedge funds (1982) and private capital (1988). More than half of Commonfund's approximately $25 billion in assets under management are in alternative investment strategies.

This begs the question: have investors been adequately compensated with higher risk adjusted returns compared to traditional strategies over this period of growth? And, perhaps more important, what should investors expect from their allocations to alternative strategies in the future?

As presented in the following pages, we believe that there is clear academic and empirical evidence that alternative investment strategies have contributed significantly to portfolio returns over the last 20 years. And we conclude that the fundamental principles that have contributed in the past to higher investment returns among alternative investment strategies, compared to traditional long only equities and bonds, remain largely unchanged as we look to the future. As such, investors that allocate capital to alternatives – with the pronounced caveat that investment talent matters – should continue to exhibit higher performance in comparison to those institutions that allocate solely to traditional assets.

But in reference to the noted caveat, allocations to alternatives should be reserved for the investor that can access top-tier managers, since the distribution of returns among alternative managers is far greater than it is among traditional managers. So while a third or fourth quartile equity or bond manager may not detract significantly from benchmark returns, sub-median (or in many cases even median) hedge funds and private capital managers will typically lag public indices.

Alternatives Reality

This paper provides both a retrospective of the last two decades of growth in alternatives to assess the extent to which alternatives have "worked" and offers a perspective on the role and relative importance of alternatives going forward.

Alternatives have now become the traditional. It is interesting to note that while 30 years ago alternatives were in fact "alternatives", they have now become mainstream. The latest NACUBO–Commonfund Study of Endowments (NCSE) reports that more than half of all assets held by university endowments are in a broad array of strategies that we refer to as alternatives. And while the magnitude of allocations to alternatives among endowments and foundations remains skewed to the largest pools, institutions of all sizes have increased allocations and in the last decade allocations are increasing dramatically among other institutional pools, most notably pension funds. What has not changed is the wide dispersion of returns in alternative investments, making manager access and selection key determinants of success.

What has propelled and continues to drive this growth in alternatives? Alternative investment strategies are included in a portfolio to enhance returns, to reduce risk or both. They are fundamental to the structure of the so-called "endowment model" of investing which concludes that long term asset pools (whether endowments, foundations, long-term reserves or pension funds) can outperform investors with shorter term time horizons by providing capital to less efficient, more complicated, and illiquid sectors of the capital markets.

Today, investment committees, governing boards and investment staff of institutional investors that have established portfolios of alternative strategies are critically assessing whether alternatives still make sense. Two questions are most commonly asked: (1) do alternatives provide better risk adjusted performance than traditional long only equities and bonds; and (2) are alternatives effective portfolio diversifiers? A related question that committees are posing concerns the high fees typically associated with alternatives: do the portfolio benefits justify the high fees?

A recent article in the "New York Times" authored by James Stewart (10/12/2012) added fuel to the debate as it argued that alternatives have in fact detracted from returns, concluding that a simple 60/40 passively managed equity and fixed income portfolio outperforms the endowment model.

This paper provides both a retrospective of the last two decades of growth in alternatives to assess the extent to which alternatives have "worked" and offers a perspective on the role and relative importance of alternatives going forward. Our analysis concludes that alternatives have, in general, contributed significantly to portfolio performance over the last twenty years – either by

providing better returns or reducing volatility. More important, we conclude that thoughtfully constructed portfolios that include allocations to alternative investment strategies are well-positioned to continue to outperform the "traditional" 60/40 benchmark. But, simply allocating 20, 30, 40 percent or more to alternatives does not ensure success, as the pages that follow highlight. *Talent is key and for investors unable to gain access to top-tier investment managers, caveat emptor!*

For the purpose of this discussion we will focus on three specific types of investments that make up a majority of the alternative allocations among university endowments: private equity, venture capital, and hedge funds (because their investment structures are similar, we use the term "private capital" to include both private equity and venture capital). Real asset strategies – also typically viewed as alternatives, including natural resources, real estate and commodities – will be a subject for another paper.

Chart I below demonstrates the growth of alternatives from the NACUBO–Commonfund Study of Endowments (NCSE) over the last 10 years. Chart II is the breakdown of the alternatives category from the NCSE as of June 30, 2012.

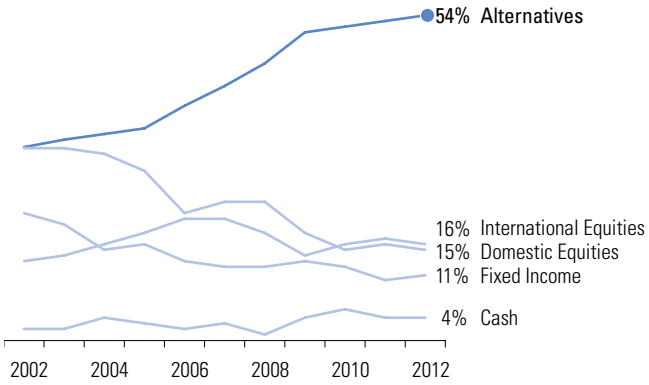
The Early Years – Building the Foundation for Change

If we jump in our time machine and go back to the late 1960's what we find is that most long-term, mission based asset pools were primarily invested in fixed income instruments. While some institutions allocated small amounts to equities, equities were generally viewed as too risky for endowments and foundations. This approach all changed with the ground breaking work done by the Ford Foundation with the publication in 1969 of *The Law and Lore of Endowment Funds* which addressed the legal principles governing endowments and recommended changes in approaches. A second report, *Managing Educational Endowments*, analyzed investment performance and recommended changes in the ways endowments managed their assets. Commonfund was founded with a grant from the Ford Foundation, commencing operations in July 1971, and the seeds were sown for the broad growth of the endowment model, and ultimately, development and growth of alternative assets.

Chart I

Asset Allocation | June 30, 2012

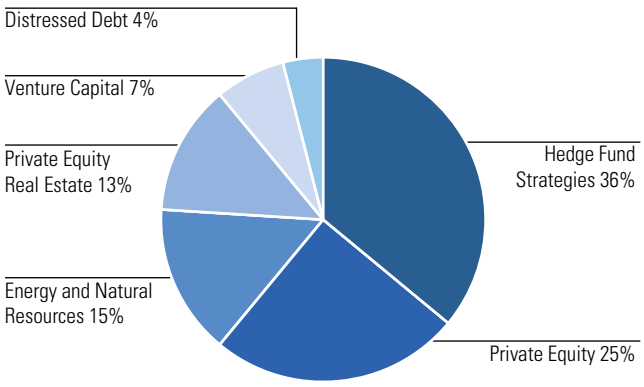
Steady Inrease of Alternatives Over10 Years



Source: NACUBO-Commonfund Study of Endowments (NCSE)

Chart II

Alternatives by Strategy | June 30, 2012



Source: NACUBO-Commonfund Study of Endowments (NCSE)

Over the intervening years endowments dramatically increased allocations to equities and decreased allocations to fixed income strategies. Unfortunately, the immediate benefit of strong investment performance from this shift was elusive: the decade from 1972 and 1982 offered little to investors – the Dow Jones Industrial Average went from 800 to 860, but bond performance was far worse with the U.S. 10-year Treasury Yields rising from 6.2 percent to 13 percent. During this period most investors maintained a simple asset allocation between equities and fixed income. For instance, Harvard University's asset allocation was 65 percent equities as represented by the S&P 500 and 35 percent bonds as represented by the Lehman Bond index.

During this period we also experienced the nascent growth of both private capital and hedge fund investing. While the origins of private capital and hedge funds can go back well before the 1970's, much of their modern structure that remains with us today were created at that time. (*While we look to the late 70's and early 80's as early history of private capital investing, the concept dates back to the post-civil war era but was largely the purview of industrialists and investment banks.*) The early tenants on Sand Hill Road in Menlo Park, California, oft-viewed as the epicenter of the venture capital industry, set up shop in the early 1970's. More than 100 hedge funds were also in existence at this time as well, expanding from simply long short strategies to strategies with increasing use of leverage. But challenging equity markets and the bear market of 1973-74 and stock market crash kept many institutional investors on the sidelines.

In the late 1970's Harvard began investing modestly in private capital limited partnerships and also allocated to a small number of co-investments (direct investments made into companies generally alongside an existing private capital manager). At the time, this type of private investing was largely confined to high net worth individuals (referred to as "the deals business") so these early partnerships offered Harvard and a small group of other institutional investors an opportunity to place capital where capital was lacking. In addition, in the late 70's Harvard began to engage in arbitrage activities that were primarily the purview of the early hedge funds and investment banks (referred to as "side games"). Obviously things have changed radically since those early years. Private capital enjoyed a boom from the early 1980's for the next decade propelled by leveraged buyouts (more than 2000 LBOs were consummated over the period), and a proliferation of new venture capital firms looking for the next Apple computer. Hedge funds came of age in the mid-80's, with the great success of firms such as Julian Robertson's Tiger Fund, and investors flocked to the industry, with thousands of hedge funds being formed. From then until today, we have seen subsequent periods of booms and busts across venture capital, private equity and hedge fund industries, some perhaps not as memorable as the internet IPO boom and subsequent dot-com bust. Remember the Super Bowl in January 2000 when 19 internet start-ups featured Super Bowl ads – the Pets.com sock puppet should have been a clue!

Notwithstanding this period of investment success and failure, asset growth among educational endowments and other perpetual pools over the period from the adoption of the endowment model to today has been nothing short of remarkable, providing resources for the nonprofit community to fulfill their missions at levels not possible in the decades before. Total inflation-adjusted endowments held by U.S. colleges and universities grew from just over $100 billion in 1989 to more than $400 billion in 2008[1]. So the question, how important have alternatives been to this growth?

Defining Alternatives

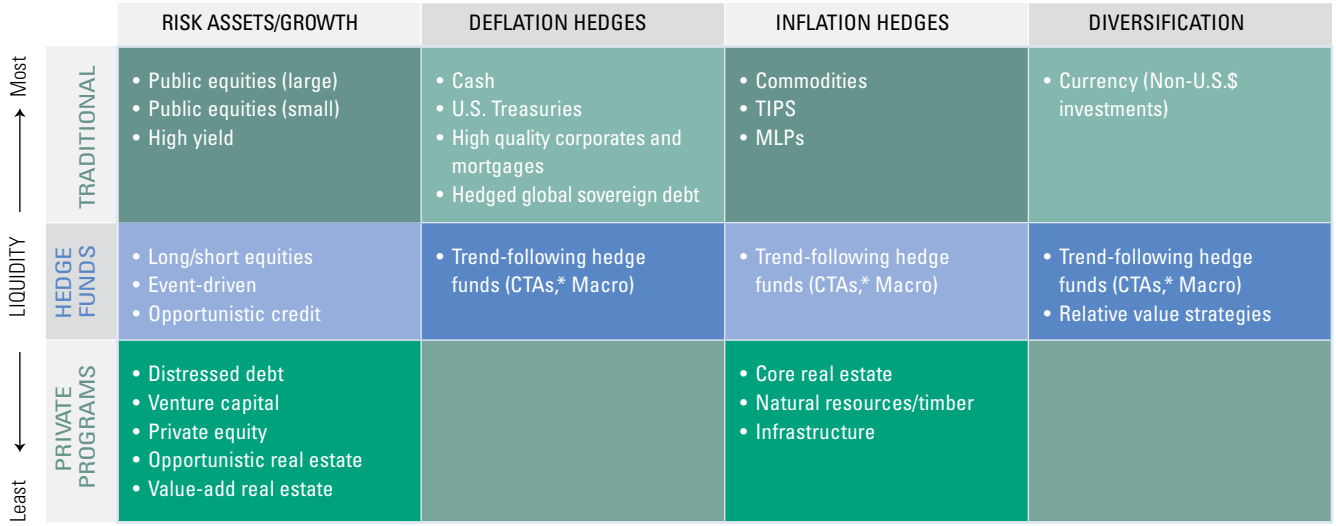
While we tend to lump a broad range of alternatives into a "bucket" alongside an equities bucket and fixed income bucket, alternatives are not an asset class. Rather they are an amalgamation of investment strategies that are included in a portfolio for specific purposes: (1) growth; (2) deflation hedge; (3) inflation hedge; and (4) diversification/uncorrelated alpha depicted in Chart III on the following page. Some alternatives are truly risk assets that are in portfolios to generate growth via underlying equity exposure, such as venture capital, private equity, distressed debt and long short equity hedge funds. Other alternatives may have higher correlations to fixed income and thus can be more deflationary hedges. Still other alternatives such as commodities, real estate and natural resources are largely uncorrelated (over market cycles) with equities and fixed income and instead constitute the real assets allocation in a portfolio as inflation hedges. Left over among

[1] Source: U.S. GAO report

Chart III

Asset Classes and Purpose in the Portfolio

Hypothetical Example



* CTA = Commodity Trading Adviser

Note: For illustrative purposes only. Asset classes and investment strategies listed are representative and not intended to be all inclusive.

alternative strategies are those – largely certain hedge fund strategies – that have no market exposure and exist solely as portfolio diversifiers and sources of uncorrelated sources of alpha, such as global macro strategies and market neutral hedge strategies.

With the exception of commodities (which you can index) all of these strategies are highly dependent on manager skill and are less liquid than most publicly traded equities and fixed income markets. Hedge funds will have lock-up provisions that in general range from one quarter to one or two years, while private equity and venture capital programs are usually 10-12 year or longer partnerships.

A simple way to look at these groups is as follows:

- *Venture Capital and Private Equity* – designed to provide enhanced returns relative to public equity markets at the "cost" of liquidity
- *Hedge funds* – designed to dampen portfolio volatility, protect against market declines and provide uncorrelated return streams over market cycles

Each of these strategies are now reviewed below in greater detail focusing on their historical development in the context of how they can impact portfolios now and going forward.

Private Equity

In the nascent days of private equity, long-term institutional investors used a number of reasons to justify allocations to these strategies, including:

- Greater alignment of interests between investors and the users of capital
- Capital scarcity
- Market inefficiencies
- The use of leverage to boost returns
- Diversification benefits
- The existence of an "illiquidity premium"

Greater alignment of interests

At the outset and still today, the private equity governance model provides for a clearer alignment of interest between the investor, the board and the management relative to publicly-held firms. The boards of private equity-backed companies usually include representatives of General Partners who represent the interests of investors. Further, management typically owns a significant portion of the equity interest aligning them directly in the outcomes. Quite simply, if the company does well everyone does well. In addition, the carried interest earned by the General Partners on realized gains provides significant incentive for capital gains. Since the boards consist primarily of direct

investors in the company, the oversight by these boards can be more active in contrast to a public company. This includes more meetings per year, richer content per meeting, greater involvement outside of board meetings and active ownership if the company should be performing better.

Capital scarcity
While there have been well-chronicled periods of capital overhang in private equity markets during boom periods, the early formation of private equity markets was characterized by a dearth of capital versus the public market. Certainly, as long-term investors it is always better to go where capital is in short supply. Entities that need capital are more likely to pay up for that capital with a willingness to sell at lower prices. Harkening back to 1980 the amount of capital raised by private equity partnerships was less than 0.05 percent of the stock market capitalization. That was truly a buyers' market.

Market inefficiencies
The private market in its formative years was much more opaque than the public market. Companies didn't necessarily have published financial statements so the ability to find investments was much more difficult and required more effort, expense and expertise. The resultant private market inefficiencies afforded the opportunity for astute investors to find and negotiate good opportunities.

Leverage
Another driver of growth in private equity in the formative years was the use of leverage to boost returns. Particularly in the early years of private equity investing, companies could be purchased for little cash and a lot of liens. The leveraged buyout market (LBO) developed alongside the market for "junk bonds" which rose to prominence in the 1980's. Leveraging equity investments at acquisition provided for an asymmetric return pattern. Win and a huge multiple went to the equity holder; lose and the debt holders take the lion's share of the losses.

Diversification
A fifth reason for the early growth in private equity was that it was considered by most to be a diversifying asset that had low correlation to public equities and fixed income. (Note: Commonfund has long believed that such diversification benefits are significantly overstated.) As we discuss later, such diversifying benefits don't really exist today, as in times of stress equities tend to move in lockstep whether in public markets, private markets, U.S. or international markets.

Illiquidity premium
While investors and private equity managers didn't talk about it at the time, there exists – at least in theory – a natural illiquidity premium in private equity investing. In other words, because private investments cannot be easily liquidated they should offer investors a higher return than similar investments in a liquid (public) market. We have seen this premium historically in less liquid public markets such as small cap and Emerging Markets and it exists in private markets as well.

The early days of private equity investing were also marked by very limited competition for investor capital. The fees earned by such firms in the face of little competition were lucrative indeed – and remarkably have changed little today even in the face of dramatic industry growth. The 2 and 20 fee structure (representing a two percent management fee and 20 percent carried interest on profits) was the rule. In addition, in the early days the General Partners took an additional investment banking fee that was charged to the investee company. There were also some firms that for return purposes treated each investment on a standalone basis and therefore did not net losers against the winners for the carried interest calculation.

Private Equity Today

That was then and this is now. Did private equity fulfill its promise, how has it changed in the last three decades and what does it look like going forward?

Let's go through some of the reasons we looked at private capital 30 years ago and see if the properties still hold.

Greater alignment of interests
First, the alignment of interest has not changed. The private equity governance model for investors, the board and management has not changed. The private equity investors who are looking for the returns still sit on boards and tightly oversee the management teams which normally have significant equity holdings. The private equity firm General Partners still closely monitor the company, change management when needed and provide guidance and assistance to management. This model has and should continue to be part of the value proposition for this investment strategy.

Capital scarcity

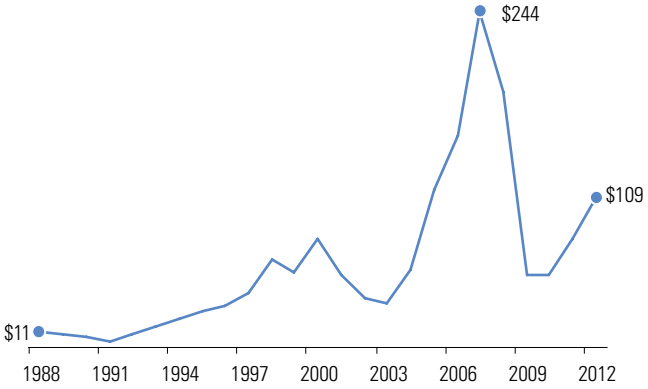
Second, there has been a significant amount of private equity raised over the last decade. Where in the very early days the investor base was limited to a narrow range of high net worth investors and a few endowments, the investor base today has expanded substantially with almost every type of long-term investor dipping their toes or their whole feet into the private equity waters. The question is: has this destroyed the dearth of capital argument? The answer is yes and no. There has been a lot of capital raised and Chart IV on the right looks at the commitment to private equity over the last 30 years. We have moved from very small numbers in the early 80's to annual capital raises of over $100 billion today. However, when this market size is viewed as a percentage of the market capitalization of the public equity markets, the relative size of private equity remains small and not much different than the mid-80's. So while there is significantly more money in the space, it is still relatively small at less than 0.4 percent of public stock market capitalization even after a huge up tick in fundraising at the end of the boom in 2007. So capital remains relatively scarce, but certainly not at the levels of the very early days of institutional movement into this space.

The other relevant factor regarding the scarcity of capital argument is the amount of "overhang," defined as the committed but uninvested capital. Chart V on the right is a graphical representation of this overhang. What is quite apparent from this graph is that the largest percentage of the overhang remains in the very large buyout funds. These are funds that raised a large amount of capital, and by and large require transactions of significant size. The ratio of committed to uninvested capital among smaller funds which tend to invest in smaller and mid-sized companies are relatively in-line with historical norms. While it is a possibility that the mega funds may move down market and reduce the scarcity factor that still largely exists in the middle market, most large buyout firms are not organized in a way that supports a large number of smaller transactions.

Chart IV

Fundraising | U.S. Private Equity

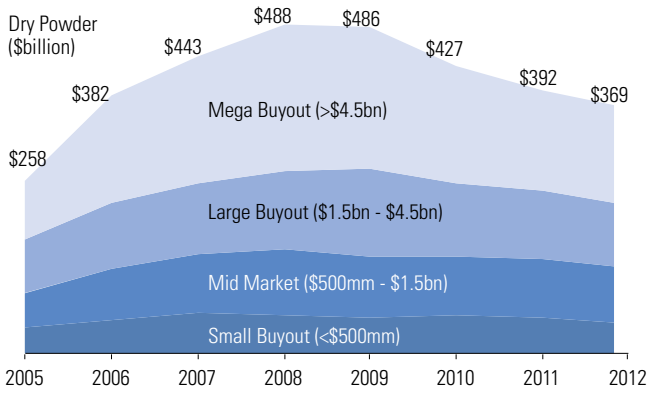
Dollars in Billions



Source: Thomson One.com Private Equity. Data includes all U.S.-based funds with strategies marked as "buyouts", "turnaround/ distressed debt", "generalist", and "other private equity/special situations". Data as of 12/31/12.

Chart V

Overhang of Uninvested Capital



Source: Preqin as of October 2012

Market inefficiencies

The opaque nature of privately-held companies has not changed much in the last 30 years. However, there may be some changes in the offing that may provide new capital and more information to a broader base of investors. The concept of crowd funding has been talked about for several years and would allow the Internet to provide investment opportunities to investors outside of the General Partner universe. The JOBS Act passed last year does allow for small companies to potentially raise investment through the Internet, although the SEC and CFTC continue to work on the detailed regulations of how this would work. As such, it is unlikely this change to the regulatory environment will have much impact in the next several years.

There was a similar debate several years ago with respect to angel funding and venture capital (would it displace or disrupt that space), which ended up having little impact as the overall capital available was (and is) too small to have any discernible impact on returns for the industry as a whole.

Leverage

In the early days of private equity investing leverage was a critical part of the calculation. In fact, we referred to private equity strategies then more often as Leveraged Buyouts (LBOs) than private equity. LBOs are still executed by private capital firms, but its importance has diminished. Today, leverage has become less important, and instead, the two other main drivers to returns, multiple expansion and growth, have become more important in the underlying earnings of the investment. Chart VI outlines the change in the "value drivers" of private equity over the last 30 years as well as a view looking forward. In the 1980's, more than half of the change in values was the result of the use of leverage. In the go-go nineties, the greatest contributor to returns came from multiple expansion. The decade of 2000 – 2009 was more evenly balanced between multiple expansion and the growth of earnings. As we look forward to the 2010's we believe that the lion's share of returns will come from operational improvement driving growth in earnings. This changes the way we think about investments today. In the 1980's managers that added value focused more on financial engineering, today it is about finding managers that can have a positive impact on improving operations and earnings – during fundamental improvement at the company level.

This ability to change the course for a portfolio company is, in our view, the biggest determinant of what separates top managers from median managers.

Diversification

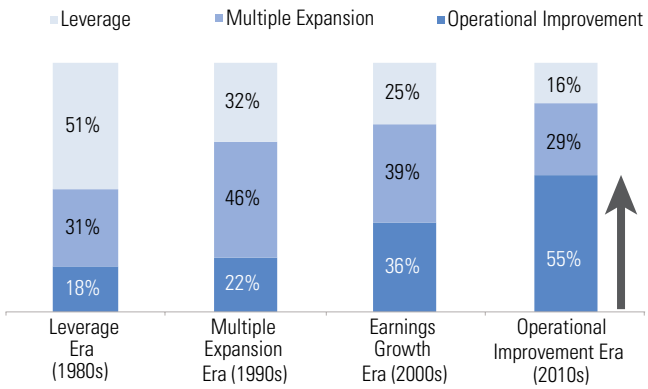
The promise of diversification benefits from private equity investing which propelled some of its growth over the last 30 years has changed. Historically, at least some of the apparent lack of correlation of returns came from the way the General Partners marked their positions to market. Generally, losing positions were written down when the market or operating results were poor and winners were not marked until there was an event like a new round of financing or a sale of the company for price discovery.

This has changed over the years. New accounting pronouncements (ASC 820 and AU-2009-2012) and pressure from institutional limited partners have forced private equity funds to value based on a number of factors. As a result, the volatility of private equity as well as the correlation to public equity has increased. Chart VII on the following page shows that the correlation to public markets has increased over time. *(It should, however, be noted that this increase is really a change in the way the partnerships are marked versus a real change in the fundamentals.)*

Chart VI

Value Drivers Over Time | U.S. Private Equity

Sources of Value in Percent

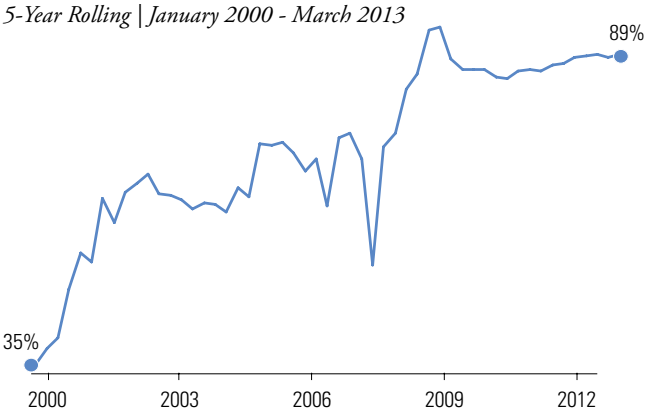


Source: The Boston Consulting Group "The Advantage of Persistence" study, February 2008.

Chart VII

Correlations | All Private Equity & S&P 500 Index

5-Year Rolling | January 2000 - March 2013



Source: Bloomberg, Thomson One.com

Illiquidity premium

There has been much written about the illiquidity premium (also called time frame arbitrage) over the last several years with no real consensus. We believe that this premium has existed and added to returns. But we need to think about the premium in several dimensions:

- First, investors simply demand higher rates of return for illiquid investments.
- Second, the optionality that private equity firms have to invest capital when valuations are cheap and sell when investment markets are at higher prices, enables investors to realize the illiquidity premium
- Third, and related to the point above, active management is an important aspect of creating value (justifying the illiquidity premium), and skill matters. *(Simply buying all illiquid investments available at the current market will not necessarily provide good returns.)*
- And fourth what portion of the illiquidity premium that gets paid away to the General Partner in fees.

In trying to quantify the illiquidity premium, the challenge is always to have an "apple to apples" comparison. Most of the reporting done is this area looks at reported survey results for private equity funds, which can be flawed because of issues surrounding survivorship bias and challenges inherent in relevant comparisons to public markets[2]. What these surveys do show is the wide dispersion of results, with the top quartile doing quite well and the bottom quartile doing very poorly (again, skill matters!). Top quartile 10-year returns of private capital using Thompson Reuters data is almost 40 percent higher than the bottom quartile.

A new study, however, sheds light on the private equity premium. A recent working paper by Harris, Jenkinson and Kaplan entitled, *Private Equity Performance: What Do We Know?*, describes one of the most comprehensive analyses of the private equity premium done to date. The study utilized Burgiss data[3] for vintage years 1984 through 2008 with performance through March 2011. The data covers approximately 200 institutional investors with 600 fund investments. Burgiss data was used because it has a large sample set that minimizes potential survivorship bias and permits the use of individual cash flows in the analysis. In order to bridge the gap between dollar-weighted (used in private markets) and time-weighted (used in public markets) return comparisons, the study calculated Public Market Equivalents (PMEs). The PME is calculated by looking at each cash flow into a private capital fund and assumes that the equivalent dollars are invested in the public market; at the same time outflows are discounted using the public market return. At the end of the period the analysis compares the total value of the private equity investment with the value of the public market equivalent. If the value is greater than 1.0, private equity did better; if it is less than 1.0 public markets outperformed the private investment.

The results of the study show that the average private equity to public market equivalents (PMEs) ranged between 1.20 and 1.27 depending on vintage year. This means that at the end of the life of the fund or the end of the study period, private equity returns would have resulted in 20 to 27 percent more dollars compared to public market over the time period measured. This translates into more than 3 percent per year – the equivalent of what we believe to be the illiquidity premium over public markets. The PME for the top quartile group of funds was double the median at 1.42.

Another source of examining returns can be found in the NACUBO–Commonfund Survey of Colleges and Universities. This annual survey of approximately 850 colleges and universities asks the returns of each asset

2 Note: private equity performance is typically presented as dollar weighted returns (internal rate of return on IRRs) while public markets are on the basis of time weighted returns.

3 Burgiss is a private capital information services firm that has data on an exceptionally deep pool of private capital partnerships going back to the early 1980's.

class for the last fiscal year. By performing a straight compounded average of these annual returns for specific asset classes over the last ten years we can get a view of how that asset class has performed.

Universities, as early adopters to private equity investing, have on average the most mature portfolios of any institutional investor groups. The compounded average takes into account those universities which are fully invested as well as those with less mature programs, and average returns for the private equity asset class should give us a fair representation of what has been experienced by a large investor base. Study returns are time-weighted and take into account all the costs associated with the investments, including manager fees and j-curves. (We believe the compounded time-weighted returns are a decent approximation of dollar-weighted returns given the overall size and cash flow stability of the population set.)

The time-weighted return as calculated for private equity was 8.4 percent per year over the ten years ended June 30, 2012 versus 5.3 percent for the S&P 500 over the same time period. This is consistent with the 3+ percent per year illiquidity premium outlined in the Kaplan study. Interestingly the larger universities (over $1 billion) which have a much higher allocation, and presumably more mature programs, did much better than the average (11 percent versus the 8.4 percent).

So what does all this mean? The illiquidity premium is alive and well over the last ten years even though there has been a lot of capital raised. When the average is able to add 3+ percent returns per year over ten years net of fees it does make a substantial difference to a long-term pool of assets. The active management portion of the return (the alpha generated by manager expertise as approximated in returns for top quartile managers) may be as high as another three percent per year on top of illiquidity premium in private equity.

But many still ask, is a 3 percent premium enough for the added risk? In many ways the answer is easy. If a long-term investor does not need the liquidity, any premium is worth taking. There is, however, an opportunity cost of any illiquid investment of simply not being able to use such capital in the short-term to rebalance – that is buying assets that are down and selling assets that are up. We estimate this cost to be approximately 30 basis points per year. So as long as you are not forced to be a seller of illiquid assets in periods of stress, the cost of illiquidity is basically the give-up associated with not being able to rebalance the portfolio for the illiquid piece. As we have written in the past you should rebalance the liquid portion of the portfolio at least quarterly and look at the entire portfolio including the illiquid investments over a three year period.

So where does all that leave us after 30 years?

Today private equity is a global investment business. Substantial assets have been raised to invest in Europe and more recently in the Emerging Markets. The techniques of U.S. private equity have been transported outside the U.S. and that has allowed many of the same attributes to pervade in Europe (and other developed countries) and the Emerging Markets.

Fees in this space have changed slightly for the better. No longer do most managers set fees on individual investments; capital gains are generally offset by losses before carried interest is paid. There has also been a movement on investment banking fees where normally between half and all of these fees are shared with the limited partners. Other terms such as cash flow waterfalls, Key Person provisions, indemnities, clawbacks, investment vehicles and others are subject to negotiation.

Private equity remains a compelling and viable method of gaining exposure to future economic growth in the vast sphere of private companies (generally over 95 percent of all companies in a developed economy are private). But it does not come cheaply, even as competition for investor capital has grown given the extensive costs associated with buying and selling companies. Not only have the number of firms gone from a handful to thousands, but an investor can build a portfolio to cover the globe or just a single country thus placing an even greater premium on thoughtful and careful selection.

We do believe that the illiquidity premium (broadly defined and after fees) has existed at about 3 percent and will continue to provide returns in excess of the public market even for the average managers. However, getting close to first quartile returns will continue to add significant value above the average manager (and conversely, bottom quartile firms may struggle to consistently outperform public markets).

In the U.S. we believe the value today is in the middle market opportunities where there is less capital available in comparison to mega and large buyouts. Operating improvements over financial engineering will provide the largest returns looking forward. Outside of the U.S., we think the growth in Emerging Market economies, where private equity is still in a nascent state, will offer attractive returns, particularly in sectors not represented in narrow public markets. So for investors capable of allocating to illiquid strategies, some of the institutional equity exposure should be taken in the private markets.

Venture Capital

Venture capital investing has generally been viewed as distinct from private equity even though the strategies share a number of common attributes. Most notably, the differences which distinguish venture capital and private equity are the sources of return and payout pattern. A look back at the history of venture capital investing and how it has evolved to today is informative. Like private equity, in the nascent days of venture investing there were a number of reasons for long-term institutional investors to allocate capital to these strategies over traditional public market equities:

- Greater alignment of interests between investors and the users of capital
- The ability to generate "innovation alpha" by investing in disruptive technologies not available in public markets
- Payoff structure of home runs over strikeouts
- Diversification benefits
- The existence of an "illiquidity premium"

Alignment of interests

Similar to private equity, the venture capital governance model provides for a clearer alignment of interest between the founder/entrepreneur and investors (General Partners) over publicly-held firms. Venture firms, in addition to providing financial capital, also provide management and operational infrastructure and advice to business owners and serial entrepreneurs to aid in the ability to generate growth, and importantly to generate profitability.

Innovation Alpha and Disruptive Technologies

The opportunity to invest in early stage companies with disruptive technologies and business models offers the potential of outsized returns. Based on history, venture returns are highly correlated to macro changes in technology. The first wave was in the semi-conductor and computing area; the second wave was in the personal computer and networking equipment arena; the third wave was in the Internet. The latest wave has finally come with the advent of mobile communication, social media, cloud computing and big data. These transformational technologies have provided good returns when the transformation begins, but like all of these disruptive technology changes, they tend to end with significant overcapacity and a few winners (and many losers). The key to success is to find those firms which can identify the top opportunities and entrepreneurs to build a company around the disruptive technology.

Payoff Structure

Venture capital has a different payout pattern than private equity and this contributed to the growth in venture commitments over the last three decades. Specifically, while private equity looks to get good positive returns on a large number of its portfolio investments, venture capital investors historically play for the home run. They tend to make a large number of investments across a number of companies and they know that a majority will likely lose money. If all works the way it should, these losses will be offset by a few home runs, where the returns will be many multiple times the initial investment. Home run returns are often achieved through a public offering.

Diversification benefits

Also similar to private equity, the promise of venture capital in the early years was that it provided portfolio diversification benefits compared to public equity markets. And, the pricing of venture portfolios in which "losers" were written off and "winners" marked to market only on an event (e.g. new financing, exit), contributed to the perceived diversification benefit.

Illiquidity premium

Again, the argument for an illiquidity premium exists in that investors are going into a company privately and exiting at public market prices.

Venture Capital Today

We have concluded that private equity has, in fact, delivered on its promise. The conclusion for venture capital is more nuanced, driven in part from the historic high level of venture fund raising in the late 1990's and the resultant dot-com crash in 2000. This equivalent of the Dutch tulip bubble of the 17th century may not be seen again, but it left an indelible mark on the venture industry. So where do we go from here and how have venture markets reacted since the dot-com bubble burst?

Venture capital principles remain unchanged, but we believe fundamentally that one cannot scale innovation beyond its natural limits and, as such, providing more capital lowers returns. Today, a relatively small universe of venture capital managers capture the lion's share of the gains. Hence, strong performance is possible while index returns suffer.

Alignment of interests

The alignment of interest has not changed. However, reality has set in and the importance of operating results and profitability has returned to venture managers, as has the relevance of fund sizes to investment performance. Bigger is not better in venture capital. Not surprisingly there was a significant amount of money raised for venture investing in the late nineties and early 2000's on the back of the four most dangerous words in investing "this time it's different". (I remember going to a private capital conference in 2000 in which the speaker from a prominent venture firm stated that he saw no reason why they couldn't return 100 percent IRRs every year, forever.) If ever a statement has signaled the top of a cycle this one did. As a result of the large amount of money raised with a portion raised by marginal firms, there was a significant capital overhang in the 2000's. This certainly contributed to poor returns of the last decade. As you can see from Chart VIII, the dollars going into venture has gone down as the performance of this investment class has been disappointing.

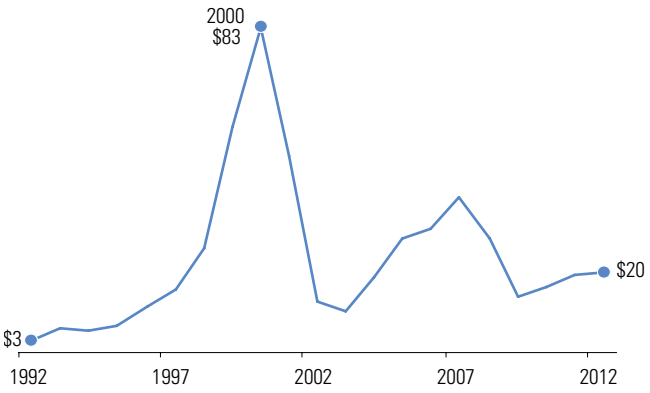
Innovation Alpha and Disruptive Technologies

Notwithstanding the "lost decade" of venture investing from 2000-2008, investors should not "write-off" the idea of investments in start-up and early stage companies. Venture returns will continue to be driven by technology. All you have to do is look at the returns associated with the combination of mobile computing and changes in social interactions defined as "social media". Even with the high profile challenges with the public offering of Facebook, the funds that made investments in this as well as other social media firms such as LinkedIn showed outstanding returns. It is hard to predict today what future disruptive technologies might be, but one thing is certain: we are not done with exponential change. Mobile computing is really at the beginning phases, the Cloud will spawn new companies that take advantage of the computing power that is almost free, not to mention robotics, the driverless car and nanotechnology.

Chart VIII

Fundraising | Venture Capital

Dollars in billions



Source: VentureSource

Payoff Structure

A key question is whether the "home run/strike out" payoff patterns have changed and if so they will become more favorable for investors. In the halcyon days of investing in venture, typified by vintage years 1994 and 1995, the number of investments among top-tier managers that were home runs (defined as multiples of invested capital, e.g. 3x to 10x and 10x or better) were at least 30 percent during those two vintage years, while the invested dollars with a loss were in the 40 percent range. As the managers entered the bubble phase and the subsequent crash we saw the number of losses as a percentage of invested assets increase dramatically while the triples and home runs (3x or better) decreased to 15 percent or less with almost no exits at higher than 10x. With that change in mind it is no wonder that the first ten years of the new millennium were basically a lost decade for venture. It should be noted that the more recent years still contain many unrealized investments and the ultimate multiple may yet increase when those investments are realized.

Managers obviously learned some lessons from the bubble and crash. The amount of invested capital that lost money fell to about one-half of the venture peak levels. It appears from the data that the industry may be evolving from a strike-out/home run approach to one in which there are more singles and doubles with a smaller percentage of strike-outs and home runs. This payoff structure is closer to what we have seen in the private equity business. Although the promise of the home run is still what drives many venture capitalists and those institutional investors that continue to commit to this strategy.

Diversification benefits

The diversification benefits of venture investing, particularly in periods of capital market stress, no longer exist. So while innovation occurs across all market cycles, and is not correlated to equity markets, exit strategies (e.g. IPOs) exhibit high correlations to public equity markets. As equity exposure, venture capital returns thus typically move in lock step with public markets. Chart IX to the right shows that the correlation to public markets has increased over time. (It should, however, be noted that as with private equity, this increase is really a change in the way the partnerships are marked versus a real change in the fundamentals.)

Illiquidity premium

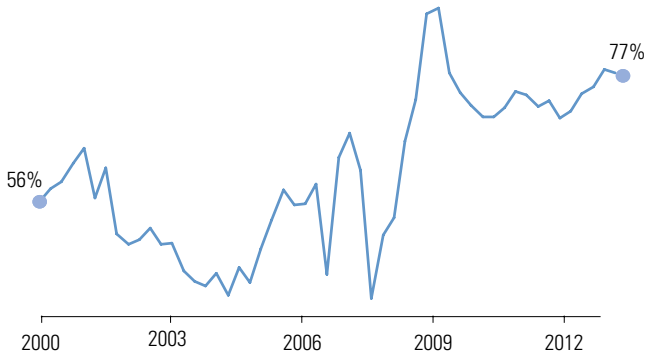
Harris, Jenkinson and Kaplan also looked at historical performance of venture capital returns on a PME basis and the results are not as compelling as private equity over the same 20 year period. Clearly venture returns over the past two decades have been very volatile, reflecting a tale of two decades. Again using Burgiss data, while the average PME was 1.36 versus the S&P 500 over the 25 vintage year period beginning in 1984, the 1990's had a PME of 1.99 and the 2000's through vintage year 2008 with performance through March 2011 had a PME relative to the S&P 500 of only 0.91. In other words, an investor would have been better off investing in the liquid stock market than the average venture manager from 2000 – 2008. (Note: top performing managers did well even in this difficult period.) The decade from 1990 – 1999 was driven by the Internet bubble. This led to more money being raised which led to disappointing returns from 2000 – 2008.

The NACUBO–Commonfund Study of Endowments (NCSE) which had a time-weighted return of 5.76 percent for the ten years ended June 30, 2012 compared to an S&P 500 return of 5.33 percent is consistent with the Kaplan analysis. Just as evident in the Burgiss data, a substantial driver of these 10-year returns are a large loss in 2003 relative to the S&P 500 reflecting the big write-downs in 2003 at the tail end of the Internet bubble.

Chart IX

Correlations | Venture Capital & Russell 2000 Index

5-Year Rolling | January 2000 - March 2013



Source: Bloomberg, Thomson One.com

Where does all of this leave us as it relates to venture investment? First, we do not believe that we will see another bubble like the one that we experienced in the late nineties in our lifetime. So as we look forward, in this area, we should expect returns that are comparable to what we will see in private equity. Not the nineties, but not the 2000's either.

One word of caution, however; the difference between the return of the top quartile managers and the average manager is larger in venture than in any other asset grouping. So allocating capital to the best managers is a necessary condition to succeed. This is further supported by the work performed by Harris, Jenkinson and Kaplan as it relates to persistence. Table A below looks at the PME of all venture capital funds ranked by quartile. The vertical axis represents the quartile ranking of the previous fund, one through four. The horizontal axis is the ranking of the next funds. The PME included for those funds in each quartile is the column on the right. So funds which were in the first quartile have their next fund registered in the first quartile 49 percent of the time and those funds which are in the fourth quartile have their next fund in the fourth quartile 45 percent of the time. The PME of the first quartile versus the fourth quartile is a whopping 2.85 versus 0.69. (Contrast this to the PME private equity where the PME difference between first and fourth quartiles is 0.25) This persistence of the best managers was consistent in the period before 2000 and well as the most recent decade.

Finally, in assessing where venture goes from here, as with private equity, we should not forget about the changes that are going on in the Emerging Markets. In China and India we have found terrific opportunities that have in many cases resulted in excellent returns. An interesting fact also highlights that innovation and disruptive technology are not the sole purview of Sand Hill Road in Menlo Park. In addition, today, immigrants make up 40 percent of STEM (Science, Technology, Engineering and Math) students in Master's and Ph.D. programs. The sheer number has ballooned to 205,600 students as of 2011, according to Immigration and Customs Enforcement records, and with tighter immigration laws in the U.S., many of these non-U.S. students are returning to their home countries to be the entrepreneurs of the 21st century. But whether it is the U.S., Europe, China or India, the most important factor determining success in venture capital is access to the best and most persistent managers.

Table A

Persistence in Performance | Are there good GPs? Historically, yes!

		Current Fund Quartile					
		1	2	3	4	Total	PME
Previous Fund Quartile PME	1	49.4%	20.5%	16.9%	13.3%	100%	2.85
	2	28.0%	32.0%	26.7%	13.3%	100%	1.38
	3	27.0%	30.2%	22.2%	20.6%	100%	1.34
	4	3.9%	23.5%	27.5%	45.1%	100%	0.69

Source: Has Persistence Persisted in Private Equity? Evidence From Buyout and Venture Capital Funds Robert S. Harris*, Tim Jenkinson,** Steven N. Kaplan*** and Ruediger Stucke****, April 2013 Updated data from Prof Kaplan's website http://faculty.chicagobooth.edu/steven.kaplan/research/kpe.pdf

Hedge Funds

I have purposely waited until last to cover the topic of hedge funds. These are among the most enigmatic and mysterious of all of the strategies in the alternative bucket. It is also the asset grouping that has the highest allocation among alternatives in the nonprofit sector; and for the largest college and universities, allocations to hedge funds are higher than they are to U.S. equities at 19 percent versus 15 percent, respectively. For institutional investors, hedge funds came to the fore in the early 2000's when the Internet bubble burst. In that period hedge funds were flat to up a little when the equity markets were down 20+ percent. It was at that point that hedge fund asset growth really took off.

Today, hedge fund assets under management are at an all-time high, yet net inflows have fallen to 2-3 percent annually from 11 percent pre-2008. Fewer funds are being launched and two-thirds of the industry is now concentrated with managers with more than $5 billion in assets under management. Clearly, hedge funds are a maturing industry, but does that mean they are no longer a good investment?

A recent Bloomberg Businessweek article, replete with provocative cover art and headline "Hedge Funds are For Suckers", combined with recent weak industry performance relative to equity markets since the financial market crisis and high profile investigations by the SEC and others – have all served to fuel the debate on the value and role of hedge fund strategies in institutional portfolios.

As we have for private equity and venture capital, let's look back on the factors that helped propel growth in hedge fund strategies among institutional investors. These have included:

- Diversification benefits
- Capital scarcity and unconstrained mandates
- Manager skill and "alpha"
- The use of leverage to boost returns

Diversification

The first hedge funds were, indeed, designed to hedge. At least two centuries ago, millers and grain merchants on the agricultural commodities exchanges in Europe took long and short positions in different but related agricultural markets to protect themselves from sudden adverse moves in the prices of wheat, oats and other grains in which they dealt. Over time, these principles began to be applied to trading in equities, bonds, currencies and other financial instruments. The creation of the first modern hedge fund is often attributed to Alfred Winslow Jones, a former Fortune magazine writer. To reduce the effect of stock market fluctuations on his fund's valuation, he both bought stocks and sold stocks short.

Unconstrained mandates

In large part due to the unregulated nature of hedge funds, hedge fund managers had tremendous investment flexibility. When we go back to the beginnings of hedge fund investing by nonprofits in the early eighties, the concept was quite simple. There were clearly opportunities to go beyond the pale of the traditional long-only investor. For the right and skillful manager the ability to go long or short, to be unconstrained around investments, to look for opportunities wherever they may be, to leverage and take a longer term time frame and not be forced into the consultant style boxes created large advantages for those investors which truly had skills. In addition, the alignment of incentives was a very appealing concept. The manager did not get rich unless the client did well. In the olden days hedge funds were relatively small with small and focused teams led by an investment guru. Over time this Siren's song of this structure was just too compelling for both investment professionals and institutions to ignore. If you were a good long only investor or worked with a bank's capital how could you not want to escape the bounds of style buckets transparency, high levels of compliance and oversight to a land where none of those things existed and you could work for 2 percent base fees (versus fractions of a percent) and 20 percent of the profit. For investors, achieving unconstrained, low volatility, low correlation high returns this was almost too good to be true.

Manager Alpha

Much of hedge fund investing in the early days was based on exploiting market inefficiencies; that is, having better information, tools or models that could take advantage of mispricings. Hedge funds have historically been a "skill" game where investors paid up for superior investment talent with the expectation of outsized returns compared to traditional long-only strategies.

Leverage

Given the flexibility underlying hedge fund strategies, the ability to use leverage was viewed as another tool to enhance performance. Even in the early days of Alfred Winslow Jones, he employed leverage, borrowing money to invest in the portfolio and thereby increasing his long exposure. Certainly, among the most notable uses of leverage was Long-Term Capital Management which used aggressive trading strategies to exploit minute pricing anomalies – then used high levels of leverage to generate high profits, only to collapse in a flight to liquidity.

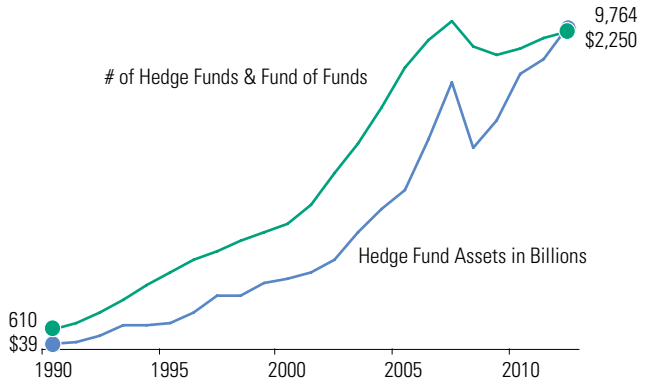
Hedge Funds Today

So what has changed in this category over the last two decades and how should we think about hedge funds in the future? There is probably not an area of investing that has had more growth in the last twenty years. The industry has gone from a small group of gurus working with a limited amount of assets with small focused staffs, to a huge industry with more than 10,000 hedge funds with $2.3 trillion under management. (See Chart X). There are now almost twice as many equity analysts working for hedge funds as for long only managers. Successful guru centric organizations have become mega firms with multi-strategy approaches and hundreds of employees running billions of dollars. We have also moved from the concept of just hedge funds to a number of style boxes that define the underlying strategy focus. The current breakdown of the assets allocated to these style boxes are outlined in Chart XI. So if hedge funds can generate good non-correlated returns (even after fees) doesn't it make sense to allocate capital to this area? And, have hedge funds lived up to their promise? Let's review the case against the drivers of growth two decades ago.

Chart X

Hedge Funds Growth

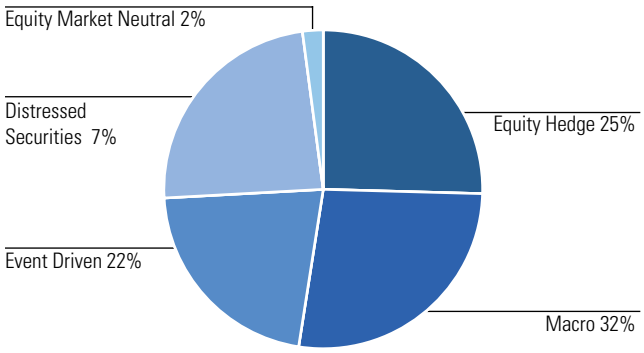
1990-2012



Source: HFRI

Chart XI

Strategy Allocation



Source: HFRI

Diversification

The growth and maturation of the hedge fund industry has led to a blurring of the diversification benefits in large part because many so-called hedge fund strategies over the two decades have been nothing more than high priced beta exposures. As evidence, aggregate hedge fund correlations (as measured by the HFRI Fund Weighted Composite[4]) relative to the S&P 500 index have risen steadily from about 40 percent to more than 70 percent.

However, a universe-wide look at correlations reasserts that the risk and return properties of a hedge fund allocation are not simply a function of the broad equity market. As the total number of funds has risen within the HFRI universe, so too has the number of funds that are highly correlated to broad equity markets. However, as noted in Chart XII below, there has been a greater increase in the number of managers with less than 10 percent of their return explained by the S&P 500 Index than any other group. This tells us that diversification still lives, but the devil is in the details for investors who seek to construct portfolios.

The benefit of diversification is also evident in the measure of downside protection and the power of compounding demonstrated in Chart XIII below. The chart illustrates that over the time frame from 1990 until today the HFRI index has outperformed both stocks and bonds with much of the relative return benefit coming in that very difficult early 2000's period.

The downside protection benefit came during those periods where it was needed most in fiscal 2008 and 2009 where the average hedge funds used by colleges and universities returned 3 percent and down 12 percent versus the S&P 500 which was down 10.2 percent and 25.5 percent in those two years. So despite all the hand wringing and concern (not to mention the number of billionaires created) hedge funds did what they were supposed to (although there will always be some who want them to do more). For the ten years ended June 30, 2012 the compounded return of the hedge fund portion of the average college and university was 5.48 percent net of fees. This was 15 basis points higher than the S&P 500 return for the same period. *However, the key statistic may be that the annualized standard deviation was less than half of the S&P 500 at 7.6 percent versus 16.7 percent for the equity market index.*

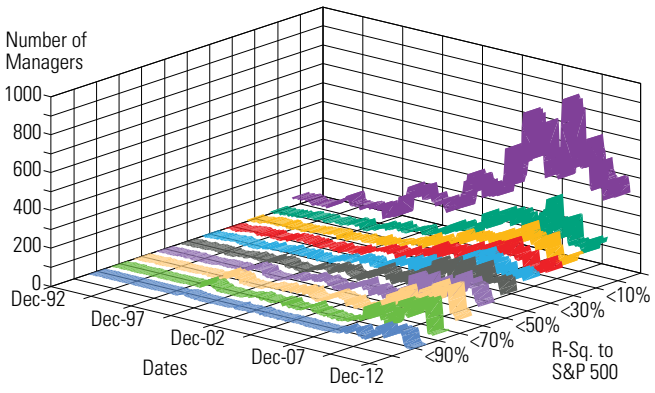
Capital Scarcity and Unconstrained Mandates

The starting point in thinking about hedge funds going forward has to be the significant increase in the dollars being allocated to these strategies, increasing by about five times over the last decade. It is this cash flow that has transformed small shops with concentrated intellectual capital into behemoths with tens of billions of dollars to deploy. If in fact there are only so many mispriced positions in the market, the amount of capital chasing these mispricings should quickly identify and close any discrepancies. This would certainly support the

[4]Note: The HFRI is an index of hedge fund returns as reported to Hedge Fund Research, Inc.

Chart XII

More Correlated Managers...and More Uncorrelated Managers

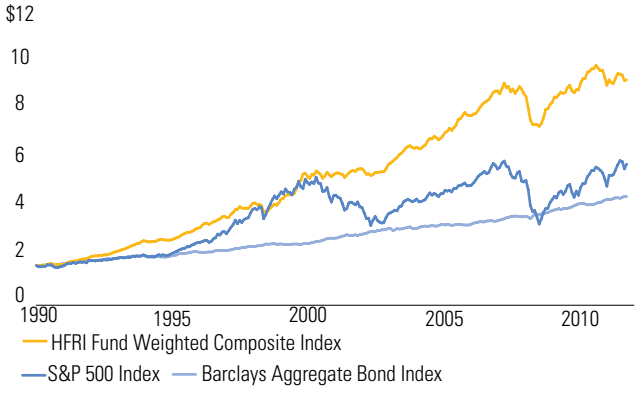


Source: HFRI, PerTrac and Commonfund Hedge Fund Strategies Group

Chart XIII

Value of Positive Compounding

January 1990-June 2012 | Numbers in Dollars ($)



Source: Bloomberg, HFRI

argument by some that future long term returns among hedge funds will not be worth the fees they charge. Further, with industry consolidation, many of the funds have become large businesses and the near death experience that hit the industry in 2008 and 2009 has management teams more highly focus on maintaining the business than generating high rates of risk adjusted returns. Looking to the future, finding those managers that are not too small to support the infrastructure necessary under Dodd-Frank but not too big to be able to find opportunities where size does not overwhelm mispricing, becomes the critical task.

Manager Alpha

Related to the point above regarding the risk of too much capital chasing too little opportunity is the question as to whether or not skill still matters, and whether top-tier hedge fund managers are still capable of generating consistent alpha (and not beta cloaked as alpha). In a 2011 study by Ibbotson, Chen and Zhu published by the CFA Institute, the authors concluded that hedge funds generated 300 basis points of alpha per annum in the period from 1995 – 2009. This study represented an update to the 1999 study by Brown, Goetzmann and Ibbotson which found statistically significant alphas in the hedge fund industry from 1989 – 2009. The 2011 study also concluded over the 15 year period that each of nine underlying hedge fund strategies contributed positive annual alpha.

The expectation of double digit returns from the hedge funds with very little downside risk is a thing of the past. It is a manager skill game that should provide returns that are over the bond rate but below the equity markets. The good news is that they still should provide downside protection in difficult market environments and compound at a rate of return even after fees that is in line with the equity markets. As to individual managers and strategies the effective use of this becomes paramount. Being able to shift between the various style buckets based on market conditions should enhance returns over the benchmarks.

Leverage

A recent headwind to hedge fund performance is the very low interest rate environment. Hedge funds earn interest (called rebates) on short positions and pay interest on margin amounts. Since many long/short hedge funds today do not add a lot of leverage, the interest on the shorts serves as a value enhancer to the return. With interest rebate near zero and in some cases having to pay interest in the shorts will reduce the overall returns of the funds. Normalized interest rates will likely reduce this headwind in the years to come.

Notwithstanding some claims otherwise, hedge funds have largely delivered on the promise of diversification, downside protection and the resulting benefits of positive compounding over the last two decades, the period of the financial market crisis included. But the industry is in the midst of significant regulatory change, and the last four years since the financial market crisis (coinciding with the fifth strongest U.S. equity bull market in history) has given pause to some investors who (unrealistically) expected hedge fund strategies to keep up more effectively with this raging bull.

The impact of Dodd-Frank remains unclear, but could actually be a net positive. The Volker rule – a section of the Dodd-Frank Act – and other capital focused regulation has really taken the banks out of the hedge fund business both in terms of sponsorship and trading bank capital with a hedge fund approach. In days past banks and investment banks used a significant amount of their own capital to perform hedge fund-like activities. The trades may have been done in trading books assisting with customer flows or in standalone trading strategies. Today many if not all of these activities have been curtailed partly because the fact that these companies are now public and subject to earnings disappointment and more recently Dodd-Frank and Basil III since the crisis. It is difficult to estimate how much bank and investment bank capital has left the market as a result of this major change in the regulatory environment.

The second tail wind is the cost of transacting in public markets. The transition over the years to electronic trading platforms has significantly reduced the cost of trading in the public exchanges around the world. This has led to higher volatility in the markets. However, with banks leaving market-making activities in some of the less liquid markets (the OTC bond and derivative markets) the cost may increase going forward. The addition of a liquid ETF market has made the ability to hedge a lot easier and cheaper. This development means that short positions can be taken much more cheaply and with great cost efficiency.

Summary

Historically, alternative investment strategies have delivered on their promise. Private equity and venture capital have provided returns well above public market equities. And, hedge funds have provided alpha across market cycles and have protected in down markets. Furthermore, this performance has held true on a *net of fees* basis.

But these statements are not without qualifiers. Most important, investment talent is key, as median performance is less likely to provide consistent outperformance relative to traditional long-only strategies. So deploying capital with top-tier investment managers in private equity and venture capital and across hedge fund strategies is necessary in order to achieve attractive risk adjusted returns.

So what does the future hold for alternatives? We believe that the fundamental principles and drivers of investment performance that have propelled returns for alternatives over the last two decades are largely unchanged. While it is true that there is more capital in these strategies and that there are many more managers, allocations to these strategies as a percentage of global equity market capitalization remains relatively small. But the one truism of the past is even more pronounced today: an "index-like" approach to alternative investment strategies will certainly disappoint.

Perpetual and other long-term asset pools such as endowments and foundations and pension funds, have not been able to maintain purchasing power over the last generation by simply allocating to a basic mix of passively managed equities and bonds. Active management of long-only strategies will only bridge part of the gap. As such, we believe that significant allocations to alternative strategies – *thoughtfully constructed*, with *top-tier managers* – are necessary to preserve intergenerational equity and thus fulfill the long-term missions and obligations of institutional investors.

The "right" allocation to alternative strategies, often a function of the level of illiquidity an institution can maintain, is among the most important decisions facing governing boards and investment committees today.

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